

AMENDMENTS TO THE CLAIMS

1-17 (Cancelled)

18. (Currently Amended) A method for receiving downloadable data in a data broadcast receiving apparatus, comprising the steps of:

 determining whether there is a downloadable data information descriptor in a broadcast stream which is received through a broadcast channel and includes the downloadable data;

 extracting downloadable data identification from the downloadable data information descriptor;

 determining the kind of the downloadable data based on the extracted downloadable data identification, wherein the kind of downloadable data includes a middleware module for accessing a mobile terminal; and

 upgrading predetermined data in the data broadcast receiving apparatus using the downloadable data according to the kind of the downloadable data.

19. (Previously Presented) The method as recited in claim 18, wherein the downloadable data information descriptor is transmitted through at least one among Program Specific Information (PSI) of the Moving Picture Experts Group (MPEG)-2 system, Data Service Table (DST) of the Advanced Television Systems Committee (ATSC) data broadcasting, Application Information Table (AIT) of the DVB-Multimedia Home Platform (MHP), and System Information (SI) of the Digital Multimedia Broadcasting (DMB).

20. (Currently Amended) The method as recited in claim 18, wherein the kind of the downloadable data further includes a middleware module for accessing a mobile terminal and a middleware plug-in.

21. (Previously Presented) The method as recited in claim 18, wherein said upgrading predetermined data in the data broadcast receiving apparatus using the downloadable data includes the steps of:

determining whether a version of the downloadable data is the same as a version of the predetermined data in the data broadcast receiving apparatus; and

setting up the downloadable data if the version of the downloadable data is not the same as the version of the predetermined data in the data broadcast receiving apparatus.

22. (Previously Presented) The method as recited in claim 20, wherein said upgrading predetermined data in the data broadcast receiving apparatus using the downloadable data includes the steps of:

checking whether a Multipurpose Internet Mail Extensions (MIME) format of the downloadable data is registered if the kind of the downloadable data is the middleware plug-in;

registering the MIME format of the downloadable data if the MIME format of the downloadable data is not registered; and

setting up the downloadable data.

23. (Currently Amended) The method as recited in claim 18, further comprising the steps of:

checking whether the downloadable data includes ~~a~~the middleware module capable of accessing ~~a~~the mobile terminal; and

accessing the mobile terminal using the downloadable data if the downloadable data includes the middleware module capable of accessing the mobile terminal.

24. (Currently Amended) The method as recited in claim ~~23~~ 18, further comprising the step of:

transmitting and receiving interactive data through a mobile communication network connected with the mobile terminal using the mobile terminal.

25. (Currently Amended) The method as recited in claim 23, wherein said checking whether the downloadable data includes ~~a~~the middleware module capable of accessing ~~a~~the mobile terminal ~~checks~~includes checking whether the downloadable data includes ~~a~~the middleware module capable of executing an access to the mobile terminal, the access to the mobile terminal being requested from a user.

26. (Previously Presented) The method as recited in claim 23, wherein said accessing the mobile terminal using the downloadable data includes the step of:
executing user authentication using the downloadable data.

27. (Currently Amended) A data broadcast receiving apparatus for receiving downloadable data, comprising:

a demultiplexing component to demultiplex a broadcast stream which is received through a broadcast channel and includes the downloadable data;

a download processing component to determine whether there is a downloadable data information descriptor in the broadcast stream demultiplexed in the demultiplexing component and to determine the kind of the downloadable data based on downloadable data identification extracted from the downloadable data information descriptor, wherein the kind of downloadable data includes a middleware module for accessing a mobile terminal; and

a processing component to upgrade predetermined data using the downloadable data according to the kind of the downloadable data determined in the download processing component.

28. (Previously Presented) The data broadcast receiving apparatus as recited in claim 27, wherein the downloadable data information descriptor is transmitted through at least one among Program Specific Information (PSI) of the Moving Picture Experts Group (MPEG)-2 system, Data Service Table (DST) of the Advanced Television Systems Committee (ATSC) data broadcasting, Application Information Table (AIT) of the DVB-Multimedia Home Platform (MHP), and System Information (SI) of the Digital Multimedia Broadcasting (DMB).

29. (Currently Amended) The data broadcast receiving apparatus as recited in claim 27, wherein the kind of the downloadable data further includes a middleware module for accessing a mobile terminal and a middleware plug-in.

30. (Previously Presented) The data broadcast receiving apparatus as recited in claim 27, wherein the processing component sets up the downloadable data if a version of the downloadable data is not the same as a version of the predetermined data.

31. (Previously Presented) The data broadcast receiving apparatus as recited in claim 29, wherein the processing component checks whether a Multipurpose Internet Mail Extensions (MIME) format of the downloadable data is registered if the kind of the downloadable data is the middleware plug-in, registers the MIME format of the downloadable data if the MIME format of the downloadable data is not registered, and sets up the downloadable data.

32. (Currently Amended) The data broadcast receiving apparatus as recited in claim 27, further comprising:

a mobile terminal accessing component to access ~~a~~the mobile terminal using the downloadable data if the downloadable data includes ~~a~~the middleware module capable of accessing the mobile terminal.

33. (Previously Presented) The data broadcast receiving apparatus as recited in claim 32, wherein the mobile terminal accessing component transmits and receives interactive data through a mobile communication network connected with the mobile terminal using the mobile terminal.

34. (Previously Presented) The data broadcast receiving apparatus as recited in claim 32, wherein the mobile terminal accessing component accesses the mobile terminal after receiving a request for an access to the mobile terminal from a user.

35. (Previously Presented) The data broadcast receiving apparatus as recited in claim 32, wherein the mobile terminal accessing component executes user authentication using the downloadable data.